

# Virginia Western Community College

## ROC 131

### Clinical Clerkship I

#### **Prerequisites**

None

#### **Course Description**

This course focuses on basic technical skills in preparation for patient set up and treatment in the clinical setting. Emphasis will be on simulation and treatment parameters. The student will gain an understanding of basic technical and patient care skills through phantom and lab work prior to direct contact.

**Semester Credits: 4**

**Lecture Hours: 1**

**Lab/Clinical/Internship Hours: 15**

#### **Required Materials**

##### **Textbook:**

Principles and Practice of Radiation Therapy. Washington, C. and Leaver, D. (2016). 4th Edition.  
ISBN: 9780323287524

Radiation Therapy Essentials Board Preparation Tool. Vann, Arazie and Sutton. (2010).  
RadOnc Publications. ISBN: 9780615416656

##### **Other Required Materials:**

Radiation Oncology *Clinical Handbook*

#### **Course Outcomes**

**At the completion of this course, the student should be able to:**

- Develop competency in the performance of basic simulation and treatment procedures
- Demonstrate proper manipulation and operation of treatment and simulation equipment
- Demonstrate proper radiation safety practices and procedures
- Identify appropriate referral channels
- Practice basic patient care skills for patients undergoing radiation therapy treatments

- Participate in lab demonstrations and simulated procedures of radiation therapy examinations under study
- Identify anatomy displayed on simulation and port films
- Display self-kept records of radiation therapy procedures in which the student has assisted and performed
- Develop and present a case study that allows the student to become more familiar with the cancer patient and the differences with each cancer case
- Demonstrates the ability to apply basic clinical concepts learned in the classroom

## **Topical Description**

### **Unit I: Review**

- Discuss 1st day of Clinical (each student should contribute)
- Remind students about reviewing objectives
- Answer any questions about paperwork
- Remind students about pre-competency form
- Handout and review case study guidelines

### **Unit II: Electrons and Bolus**

- Electrons
- Bolus
- Treatment Techniques
- Role of the Radiation Therapist
- Skin Reactions
- **Clinical Concept**
- Treatment Delivery

### **Unit III: Anatomy - Brain**

- Whole Brain
- Discuss the making of a head cast (make a head cast if possible)
- Review whole brain films
- Treatment Techniques
- Role of the Radiation Therapist
- Secondary Brain Tumors
- Scalp-Side Effects
- **Clinical Concept**
- Treatment Chart and Electronic Medical Record, Field Verification
- Techniques & Treatment Terms & Techniques (stop after MLC)

Unit IV: Anatomy - Spine

- Spine (Cord Compressions)
- Bone
- Review Films
- Metastatic Bone Disease
- Role of the Radiation Therapist
- RTE
- **Clinical Concept**
- RTE Tumor Localization

Unit V: Anatomy – Lung

- Lung (AP/PA, SVC)
- Review Films
- Introduce Mag Factors
- Treatment Considerations
- Role of the Radiation Therapist
- RTE
- **Clinical Concept**
- Lung Scenarios

Unit VI: Anatomy - Lung

- Lung (Oblique's and Multi-fields)
- Review Films
- Multiple Field Combinations
- Role of the Radiation Therapist
- Magnification Factors
- **Clinical Concept**
- Magnification Factors

Unit VII: Anatomy - Pelvis

- Pelvis (Bladder & Kidney)
- Contours
- Review Films
- Kidney-Treatment Techniques
- Bladder-Treatment Techniques
- Role of the Radiation Therapist
- Contours
- RTE Bladder
- RTE Tumors of the Pelvis
- **Clinical Concept**
- Inverse Square Law

Unit VIII: Pelvis

- Pelvis (Prostate & Penis)
- Review Films
- Prostate
- Penis
- Role of the Radiation Therapist
- RTE Prostate
- RTE Prostate
- **Clinical Concept**
- IMRT (Power Point)
- RTE

Unit IX: Anatomy – Hodgkins, Non-Hodgkin's

- Hodgkins, Non-Hodgkins, Para-aortic, Testicular
- Review Films
- Testicular
- Treatment Techniques
- Role of the Radiation Therapist
- Non-Hodgkins Lymphoma
- Role of the Radiation Therapist
- RTE Testicular
- RTE Lymphoma
- RTE Seminoma

Unit X: Anatomy – Head & Neck

- Head & Neck (Oral Cavity, Oropharynx, Larynx, Hypopharynx)
- Review Films
- Treatment Techniques
- Role of the Radiation Therapist
- RTE Head & Neck Cancers
- RTE Oral Cavity
- RTE Oropharynx, Hypopharynx & Larynx
- RTE Head & Neck Tumors

Unit XI: Anatomy – Head & Neck

- Head & Neck (Nasopharynx, Maxillary Sinus, Parotid, Off Cord Neck with Electrons)
- Review Films
- General Treatment Techniques
- Role of the Radiation Therapist
- RTE Maxillary Sinus
- RTE Parotid & Nasopharynx
- RTE Head & Neck Side Effects

Unit XII: Clinical Concept

- Total Body Irradiation

**Note to Instructors**